



# Air Quality Dust Management Plan

12 Platts Lane  
London  
NW3 7NR

23th August 2021

Prepared for:

Entire Houze Ltd.

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<b>Version 1</b>	<b>18<sup>th</sup> August 2021</b>	<b>For review</b>
<b>Version 2</b>	<b>20<sup>th</sup> August 2021</b>	<b>Amended project description</b>
<b>Final</b>	<b>23<sup>rd</sup> August 2021</b>	
<b>Final v2</b>	<b>17<sup>th</sup> September 2021</b>	<b>Dust magnitude at construction raised to Medium</b>

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## 1 Introduction

### 1.1 Site location

The site address is: 12 Platts Lane, London, NW3 7NR.

The site is located on the south eastern side of Platts Lane, to the east of Finchley Road in the London Borough of Camden (Camden).

The site at Platts Lane is currently occupied by a 2 storey semi-detached dwelling arranged over 2 floors with room-in-roof. There is a total of 3 flats at the property currently- Flat 1 on ground floor, Flat 2 on first floor and Flat 3 on second floor. The application site is the ground floor flat within the above building.



Figure 2– Street view of site – as existing

The development site area totals 340m<sup>2</sup> and is composed of the existing dwelling, hard standing to the front and landscaped areas to the rear.

The development proposals are for the excavation for a single storey basement extension under whole property with sunken rear patio area and lightwells to the front and installation of glazed balustrades with handrails at rear ground floor level, new side elevation windows, replacement of windows throughout, and erection of brick pier with metal railing front boundary treatment

### 1.2 Air Quality Overview

The development of the Platts Lane site as the potential to cause air quality impacts at sensitive locations during both the construction and operational phases.

During the construction phase of the development there is potential for air quality impacts as a result of fugitive dust emissions from the site. These were assessed in accordance with Greater London Authority (GLA) document 'Best Practice Guidance: The Control of Dust and Emissions from Construction and Demolition'

The potential for a demolition or construction site to impact at sensitive receptor locations is dependent on many factors:

- Location of the building site
- Proximity of sensitive receptors
- Extent of excavation
- Nature, location and size of stockpiles and the length of time they are on site
- Necessity for on-site concrete crusher or cement batcher
- Number and type of vehicles and plant required on site
- Potential for dirt and mud to be made air borne through vehicle movements
- Weather conditions.

### 1.3 Contact Details

The following is responsible for submitting this Air Quality Dust Management Plan:

Name: Bartek Cmiel

Address: c/o Entire Houze Ltd Buckingham House, 2nd Floor, 45 Vivian Ave, London, NW4 3XA

Tel: 0330 123 0065

Email: hello@theentirehouse.com

### 1.4 Person with Overall Responsibility

The following person has overall responsibility for delivering the project.

Name: Bartek Cmiel

Address: c/o Entire Houze Ltd Buckingham House, 2nd Floor, 45 Vivian Ave, London, NW4 3XA

Tel: 0330 123 0065

Email: hello@theentirehouse.com

### 1.5 Person Responsible for On-site for Air Quality

The Project Director will appoint a Site Manager to be responsible for air quality appropriate to the work stage.

The Site Manager appointed for the Enabling Works and Construction stages is:

Name: Kennan Zohar

Address: 46 Willrose Crescent SE2 0LG

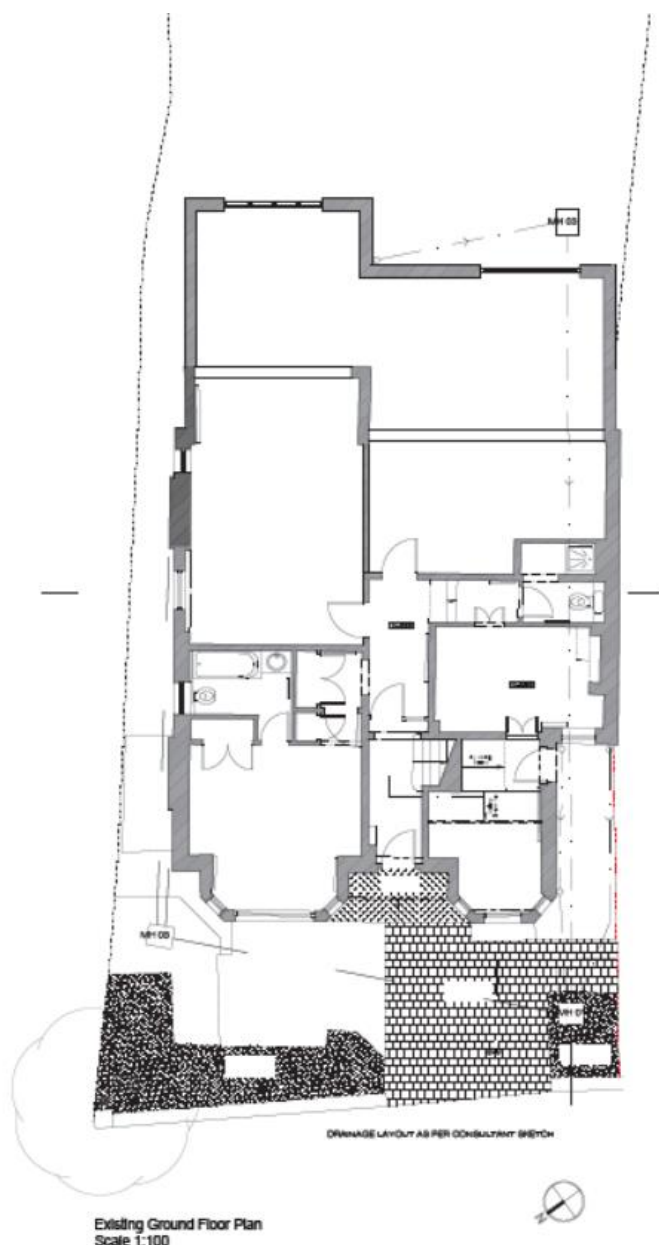
Tel: 07818 364209

## 1.6 Support for the Manager Responsible for On-site for Air Quality

The Managers appointed for Air Quality will already have general experience and training in Air Quality. Support and additional training, if necessary, should be provided.

Training will also be provided in the use of the specific air quality monitoring equipment being used on site.

## 1.7 Site Location Plan



The above drawing 'Existing ground Floor Plan' shows the location of the site to the south east of Platts Lane.

The area is generally residential in nature, with low rise 2/3 storey dwelling in most directions, with the St Lukes Church of England School to the south



## 1.8 Nearest Residential/sensitive Receptors

The nearest residential receptors would be those identified above – the residential uses to the south in all directions, and in particular, St Luke's School to the south.

Figure 2 below highlights the local sensitive receptors; the development site is marked in red, with the local sensitive receptors highlighted in green.

With the numerous residential uses in all directions and the school to the south – it can be assumed that there are 50 - 100 sensitive receptors within 50m of the proposed redevelopment works and over 100 sensitive receptors within 100m.

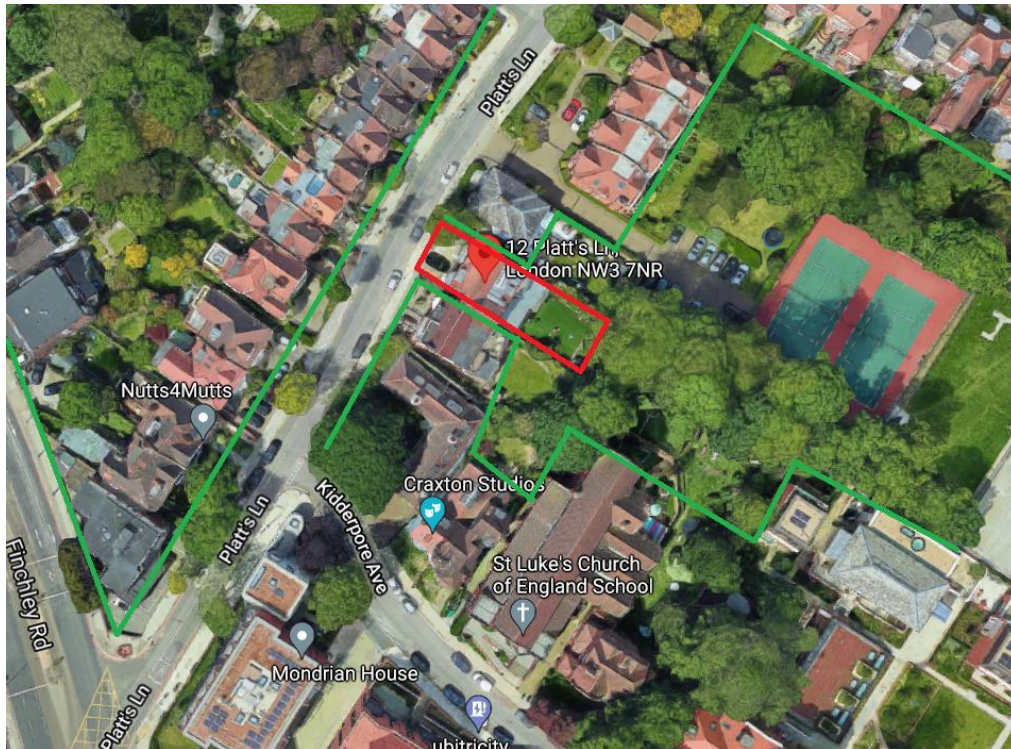


Figure 2 – Local sensitive receptors

## 1.10 Description of Site Layout and Access

The site is very compact with all areas subject to development. As such the site layout will change for each stage and during each stage of the process.

Key stages will be:

- Demolition/Soft Strip
- Basement Excavation
- Basement and Ground Floor Construction
- Internal fit out

Given the scale of the proposal and excavation works, a Construction Management Plan (CMP) would be necessary and secured via a section 106 legal agreement to ensure the development does not have a detrimental impact to local amenity and transport conditions

Furthermore, the footway and vehicular crossover directly adjacent to the site could be damaged as a direct result of the proposed works.

These processes, and the protection measures taken will be fully described in the Construction Management Plan documentation.

Common to all stages is the aim of maintaining a single point of entry for vehicles to the site for the duration of the works.

This will avoid vehicles waiting on the public highway and the establishment of appropriate traffic marshalling and wheel washing facilities.

Vehicle movements are not expected to be significant, but defined vehicle routes will be clarified in the Construction Management Plan; access will be taken from Platts Lane itself.

A watering point will be provided for the vehicle wheel washing facilities and for damping down any haul roads and material stockpiles. Water will be taken from the mains supply.

#### 1.11 Inventory and Timetable of Dust Generating Activities

(Note: that there will be some programme overlap between these stages.)

Phase of Work and Approximate Date	Activity which may give rise to emissions or dust
Site Enabling Works 7 <sup>th</sup> - 11 <sup>th</sup> June 2021	Minor deliveries. Delivery of scaffold Localised internal structural investigation. Creation of skip access
Demolition: 14 <sup>th</sup> June - 25 <sup>th</sup> June	Minor deliveries. Internal soft strip/demolition works. Breaking out of hard-standings and ground floor slab. Window openings. Vehicle and plant emission. Waste removal and transportation. Limited stockpiling.
Basement Excavation and Underpinning 7 <sup>th</sup> June 2021 – 26 <sup>th</sup> Nov 2021	Limited site traffic movement. Excavation and removal of material Temporary piling works and capping Vehicle and plant emissions.
Basement and Floor Slab Construction: 23 <sup>rd</sup> Aug 2021 – 26 <sup>th</sup> Nov 2021	Material deliveries. Limited site traffic movement. Steel reception at basement and ground floor Forming basement floors, retaining walls and ground floor slab Concrete deliveries. Vehicle and plant emissions.
Internal Fit Out: May 2022 – 15 week programme	Material deliveries. Internal construction/fit-out works Transportation of plant and materials from site.



#### 1.12 Key Dust and NOx Air Pollutant Generating Activities

Of the construction stages identified above the basement excavation and construction activities have been identified as having the greatest potential for dust generation and requiring significant NOx producing equipment.

The Air Quality Dust Management Plan will address all construction stages however greater emphasis will be given to these significant activities.

## 2 Air Quality Risk Assessment

### 2.1 Air Quality Dusk Risk Assessment (AQDRA)

The potential impact of dust generated during site enabling, earthworks and construction works at the proposed development has been undertaken in accordance with the Mayor of London's SPG for the control of dust and emissions during construction and demolition, which is closely aligned with the Institute of Air Quality Management (IAQM) construction dust guidance .

The AQRA should include:

- A risk assessment for each phase of works (demolition, earthworks, construction, trackout), which incorporates the risk evaluation process set out below, and identifies suitable mitigation measures for the relevant level of risk.
- Identification of whether each phase of activity on-site represents a low, medium or high risk by following the guidance below.

As part of the Air Quality Assessment, the AQDRA will be reviewed by the local planning authority and dust (and emissions) control measures should be secured by planning condition, as appropriate.

As outlined above, dust refers to all airborne particulate matter, which generally result in soiling, poor health and environmental damage, as well as PM<sub>10</sub> and PM<sub>2.5</sub> which have specific impacts on health. This section sets out what is to be considered and addressed by the AQDRA and how the assessment should be developed. As a minimum the assessment will have to:

- describe the site and receptors on both health and environmental grounds;
- outline the potential activities to take place within the four identified stages of development (demolition, earthworks, construction and trackout);
- the potential scale of dust emissions for each development stage; and
- the level of risk due to the scale of dust emissions on health, soiling (dirt deposited on surrounding structures) and the natural environment, with a quantitative and qualitative explanation.

To effectively control dust from demolition and construction activity, it is important to evaluate the risk caused by the pollutants emitted. The risk of dust from a demolition/ construction site to have detrimental effects on amenity, health and the natural environment is related to:

- the activities being undertaken (demolition, earthworks, construction, trackout – including the number of vehicles and plant etc.);
- the duration of these activities;
- the size of the site;
- the prevailing meteorological conditions (wind speed, direction and rainfall);
- the proximity of receptors to the activity; at the site;
- the topography of the location (whether there is a canyon effect);
- existing levels of background pollution and the adequacy of the mitigation measures applied to reduce or eliminate dust; and
- the sensitivity of the receptors to dust.

The variables above mean that any risk assessment process will, be qualitative, and the methodology below sets out a risk evaluation process based on set parameters.

## 2.2 Risk Evaluation Considerations

The approach outlined below is based on the site evaluation process set out in the Institute of Air Quality Management's (IAQM) 2014 Guidance on the Assessment of dust from demolition and construction<sup>7</sup>. This guidance is periodically updated and, therefore, the latest version of the IAQM Guidance should be used. The issues below must be considered in the preparation of the AQDRA.

To reflect their different potential impacts, this guidance breaks down activities on demolition / construction sites into the following four categories.

- demolition;
- earthworks;
- construction; and
- trackout.

The potential for dust emissions is to be assessed for each activity that is likely to take place.

The risk category assigned to the site can be different for each of the four potential activities (demolition, earthworks, construction and trackout). More than one of these activities may occur on a site at any one time. It is important to consider cumulative effects when defining the risk category. If more than one activity occurs at any one time, the level of risk automatically moves to the higher category.

The assessment procedure assumes no mitigation measures are applied, except those required by legislation. The level of risk is based on the scale and nature of the works and the sensitivity of the area.

If the site falls between two risk categories, the higher risk category should be applied. For example, if the site is assessed as low/ medium, then mitigation appropriate to a medium site classification should be applied.

Where appropriate (perhaps if the site is over a certain size), the site can be divided into 'zones' for the risk assessment. This may result in different level of control measures being applied to each zone. This could be where activities across a large site are varying distances from the nearest receptors, or where development activities move away from a receptor through time. However, on complex sites where activities are not easily segregated, the control measures appropriate for the highest risk category for that activity should be applied. This is to ensure appropriate mitigation is implemented and to make auditing simpler.

The Committee on the Medical Effects of Air Pollutants (COMEAP) have advised, in its report "The Mortality Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom", that there is no threshold below which health effects associated with small particles do not occur. Therefore the risk categories shown below represent a sliding scale of additional risk and do not consider background levels of PM<sub>10</sub>. Where background levels are high and additional PM<sub>10</sub> may contribute to, or cause, an exceedance of the air quality objective (daily and yearly limit values), such as in the situations below, a higher level of mitigation should be applied.

- Sites within an air quality management area (AQMA) declared for PM<sub>10</sub>; or
- Sites in areas where the current concentration of PM<sub>10</sub> / PM<sub>2.5</sub> are >90% of the relevant objectives (both the annual mean and daily PM<sub>10</sub> objectives need to be considered).

Air quality objectives for PM<sub>2.5</sub> (limit value and exposure reduction target) and NO<sub>2</sub> (hourly and yearly annual limit values) should also be considered when determining the level of mitigation to be applied.

### 2.3 Air Quality (dust) Risk Assessment Requirements

#### STEP 1: Screen the Need for a Detailed Assessment

The developer will normally be required to undertake a detailed assessment where there is a 'human receptor' within:

- 50m of the boundary of the site; or
- 50m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).

A detailed assessment of effects on 'ecological receptors' will be required where an 'ecological receptor' is within:

- 50m of the boundary of the site; or
- 50m of the route(s) used by construction vehicles on the public highway, up to 500 m from the site entrance(s).

If the development cannot be screened out, the developer is to provide a clear description of the proposed demolition and construction activities, their location and duration, and any phasing of the development, as far as it is known at the time of the evaluation. This information should be updated as the development progresses, to take into account any changes in timing and any seasonable implications of this as well as any changes in the proposed construction / demolition activities to be carried out on-site.

Other factors that need to be included in the description of the site and its surroundings that define the sensitivity of the area include:

- the proximity and number of receptors;
- the specific sensitivity of the receptor(s), for example a primary school or hospital;
- the duration for which the sources of dust emissions may be close to the sensitive receptors; and
- in the case of PM<sub>10</sub>, the local background concentration.

#### STEP 2: Assess the Risk of Dust Impacts

The Air Quality (Dust) Risk Assessment should be set out using the following four phases of development:

- Demolition
- Earthworks
- Construction
- Trackout

The risk assessment should consider the potential effects of each development phase on the nearest receptors including:

- the risk of health effects from an increase in exposure to PM<sub>10</sub> and PM<sub>2.5</sub>,
- annoyance due to the deposition of dust; and
- harm to the natural environment.

The risk of dust arising in sufficient quantities to cause annoyance and/or health and/or ecological impacts should be determined using four risk categories: negligible, low, medium and high risk. A site is allocated to a risk category based on two factors:

- The scale and nature of the works, which determines the potential dust emission magnitude as small, medium or large

(STEP2A); and

- The sensitivity of the area to dust impacts (STEP 2B), which is defined as low, medium or high sensitivity.

These two factors are combined in STEP 2C to determine the risk of dust impacts with no mitigation applied. The risk category assigned to the site can be different for each of the four potential activities demolition, earthworks, construction and trackout). More than one of these activities may occur on a site at any one time.

The dust emission magnitude is based on the scale of the anticipated works and should be classified as Small, Medium, or Large and are summarised in the table below:

Dust Emission risk categories

Activity	Dust Emission Class		
	Large	Medium	Small
<b>Demolition</b>	Total building volume >50,000 m <sup>3</sup> , potentially dusty construction material (e.g. concrete), on-site crushing and screening, demolition activities >20 m above ground level	Total building volume 20,000 – 50 000m <sup>3</sup> , potentially dusty construction material, demolition activities 10-20 m above ground level	Total building volume <20,000 m <sup>3</sup> , construction material with low potential for dust release (e.g. metal cladding or timber), demolition activities <10m above ground, demolition during wetter months
<b>Earthworks</b>	Total site area >10,000 m <sup>2</sup> , potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size), >10 heavy earth moving vehicles active at any one time, formation of bunds >8 m in height, total material moved >100,000 tonnes	Total site area 2,500 – 10,000 m <sup>2</sup> , moderately dusty soil type (e.g. silt), 5-10 heavy earth moving vehicles active at any one time, formation of bunds 4 m - 8 m in height, total material moved 20,000 tonnes – 100,000 tonnes	Total site area <2,500 m <sup>2</sup> , soil type with large grain size (e.g. sand), <5 heavy earth moving vehicles active at any one time, formation of bunds <4 m in height, total material moved <10,000 tonnes, earthworks during wetter months
<b>Construction</b>	Total building volume >100,000 m <sup>3</sup> , piling, on site concrete batching; sandblasting	Total building volume 25,000 m <sup>3</sup> – 100,000 m <sup>3</sup> , potentially dusty construction material (e.g. concrete), piling, on site concrete batching	Total building volume <25,000 m <sup>3</sup> , construction material with low potential for dust release (e.g. metal cladding or timber)
<b>Track out</b>	>50 HDV (>3.5t) trips in any one day, potentially dusty surface material (e.g. high clay content), unpaved road length >100 m	10 – 50 HDV (>3.5t) trips in any one day, moderately dusty surface material (e.g. high clay content), unpaved road length 50m – 100 m;	<10 HDV (>3.5t) trips in any one day, surface material with low potential for dust release, unpaved road length <50 m.

#### i Demolition phase

The scale of potential dust emissions from this phase should be determined using the following the above criteria. Developers should use the highest category their development falls within.

The Platts Lane project involves the limited break out of hardstanding to the front of the property and internal demolition of internal walls and soft strip out . All Demolition activities will be below 10m.

#### **Platts Lane**

**The dust magnitude associated with demotion works could be considered SMALL**

#### ii Earthworks phase

Earthworks primarily cover excavation, haulage, tipping and stockpiling of soil type materials. This includes levelling the site and landscaping.

The Platts Lane project has site area of approximately 340m<sup>2</sup> and includes the excavation of a new basement level.

The total volume of material to be moved will be no more than 700m<sup>3</sup>/1.3tonnes of clay and given the site area, it is expected that there will be no more than one earth moving vehicle on site.

The excavation works, albeit limited, are also scheduled for the winter months, with a basement located mini-digger conveying excavated material directly into a trailer ready for collection.

#### **Platts Lane**

**The dust magnitude associated with earthworks could be considered SMALL**

#### iii Construction phase

The key issues when determining the potential scale of dust emission during the construction phase include the size of the building(s)/infrastructure, method of construction, construction materials, and the duration of build.

The new basement development at Platts Lane has a build volume at circa 700m<sup>2</sup>.

The walls and floor will be of in situ formed concrete, delivered directly to site with no on-site mixing or batching.

However, it is proposed to crush some of the demolition materials to reuse it is a piling mat and there is also potential for local mixing of screeds/levelling compounds, but such works will be undertaken internally.

#### **Platts Lane**

**The dust magnitude associated with construction works could be considered MEDIUM**

#### iv Trackout phase

Factors which determine the risk of dust emissions from trackout are vehicle size, vehicle speed, vehicle numbers, geology and duration. Only receptors within 50 m of the route(s) used by vehicles on the public highway and up to 500 m from the site entrance(s) are considered to be at risk from the effects of dust.



The Platts Lane project has the potential for an unpaved roads, but given a site depth at a maximum of 7m, unpaved roads will be somewhat less.

Indeed, the majority of delivery vehicles will be services from the roadside, with only spoil collection vehicles actually entering the site, and then would be highly limited to 1 or 2 movements per day at peak.

### Platts Lane

#### The dust magnitude associated with trackout could be considered **SMALL**

Dust emission magnitude for each activity is summarised in Table 1 below

Table 1: Risk of Dust Impacts Prior to Mitigation

Dust Source	Emissions Magnitude
Demolition	Small
Earthworks	Small
Construction	Medium
Track Out	Small

#### STEP 2B: Define the Sensitivity of the Area

The sensitivity of the area takes account of a number of factors:

- The specific sensitivities of receptors in the area;
- The proximity and number of those receptors;
- In the case of PM<sub>10</sub>, the local background concentration; and
- Site-specific factors, such as whether there are natural shelters, such as trees or other vegetation, to reduce the risk of wind-blown dust.

The type of receptors at different distances from the site boundary or, if known, from the dust generating activities, should be included. Consideration also should be given to the number of 'human receptors'. Exact counting of the number of 'human receptors', is not required. Instead it is recommended that judgement is used to determine the receptors (a residential unit is one receptor) within each distance band.

For receptors which are not dwellings professional judgement should be used to determine the number of human receptors for use in the tables, for example a school is likely to be treated as being in the >100 receptor category.

The likely routes the construction traffic will use should also be included to enable the presence of trackout receptors to be included in the assessment. Trackout may occur along the public highway up to 500 m from large sites (as defined in STEP 2A), 200 m from medium sites and 50 m from small sites, as measured from the site exit.

A number of attempts have been made to categorise receptors into high, medium and low sensitivity categories; however, there is no unified sensitivity classification scheme that covers the quite different potential effects on property, human health and ecological receptors. However, guidance follows on the sensitivity of different types of receptors.

#### i Sensitivity of People to Dust Soiling Effects

For the sensitivity of people and their property to soiling, the IAQM recommends that the air quality practitioner uses professional judgement to identify where on the spectrum between high and low sensitivity a receptor lies, taking into account the following general Principles:

#### High sensitivity receptor

- Users can reasonably expect an enjoyment of a high level of amenity; or
- the appearance, aesthetics or value of their property would be diminished by soiling and the people or property would reasonably be expected to be present continuously, or at least regularly for extended periods as part of the normal pattern of use of the land.
- Indicative examples include dwellings, museums and other culturally important collections, medium and long term car parks and car showrooms.

#### Medium sensitivity receptor

- Users would expect to enjoy a reasonable level of amenity but would not reasonably expect to enjoy the same level of amenity as in their home; or
- The appearance, aesthetic or value of their property could be diminished by soiling; or
- The people or property would not reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land;
- Indicative examples include parks and places of work.

#### Low sensitivity receptor

The enjoyment of amenity would not reasonably be expected; or

- Property would not reasonably be expected to be diminished in appearance, aesthetics or value by soiling; or
- There is transient exposure, where the people or property would reasonably be expected to be present only for limited periods of time as part of the normal pattern of use of the land.
- Indicative examples include playing fields, farmland (unless commercially-sensitive horticultural), footpaths, short-term car parks and roads.

#### ii Sensitivities of People to the Health Effects of PM<sub>10</sub>

For the sensitivity of people to the health effects of PM<sub>10</sub>, the IAQM recommends that the air quality practitioner assumes that there are three sensitivities based on whether or not the receptor is likely to be exposed to elevated concentrations over a 24-hour period, consistent with the Defra's advice for local air quality management (Defra, 2009, LAQM Technical Guidance LAQM.TG(09)).

#### High sensitivity receptor

- Locations where members of the public are exposed over a time period relevant to the air quality objective for PM<sub>10</sub> (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day).
- Indicative examples include residential properties. Hospitals, schools and residential care homes should also be considered as having equal sensitivity to residential areas for the purposes of this assessment.

### Medium sensitivity receptor

- Locations where the people exposed are workers, and exposure is over a time period relevant to the air quality objective for PM<sub>10</sub> (in the case of the 24-hour objectives, a relevant location would be one where individuals may be exposed for eight hours or more in a day).
- Indicative examples include office and shop workers, but will generally not include workers occupationally exposed to PM<sub>10</sub>, as protection is covered by Health and Safety at Work legislation

### Low sensitivity receptor

- Locations where human exposure is transient.
- Indicative examples include public footpaths, playing fields, parks and shopping streets

### iii Sensitivities of Receptors to Ecological Effects

Dust can have two types of effect on vegetation: physical and chemical. Direct physical effects include reduced photosynthesis, respiration and transpiration through smothering.

Chemical changes to soils or watercourses may lead to a loss of plants or animals for example via changes in acidity. Indirect effects can include increased susceptibility to stressors such as pathogens and air pollution.

These changes are likely to occur only as a result of long-term demolition and construction works adjacent to a sensitive habitat. Often impacts will be reversible once the works are completed, and dust emissions cease.

The advice of an ecologist should be sought to determine the need for an assessment of dust impacts on sensitive habitats and plants. Professional judgement is required to identify where on the spectrum between high and low sensitivity a receptor lies, taking into account the likely effect and the value of the ecological asset. A habitat may be highly valuable but not sensitive, alternatively it may be less valuable but more sensitive to dust deposition.

Consequently, specialist ecological advice should also be sought to determine the sensitivity of the ecological receptors to dust impacts. In general, most receptors will either be of high sensitivity or low sensitivity i.e. either sensitive or not to dust deposition. The following provides an example of possible sensitivities.

### High sensitivity receptor

- Locations with an international or national designation and the designated features may be affected by dust soiling; or
- Locations where there is a community of a particularly dust sensitive species such as vascular species included in the Red Data List for Great Britain.
- Indicative examples include a Special Area of Conservation (SAC) designated for acid heathlands or a local site designated for lichens adjacent to the demolition of a large site containing concrete (alkali) buildings.

### Medium sensitivity receptor

- Locations where there is a particularly important plant species, where its dust sensitivity is uncertain or unknown; or

- Locations with a national designation where the features may be affected by dust deposition.
- Indicative example is a Site of Special Scientific Interest (SSSI) with dust sensitive features.

#### Low sensitivity receptor

- Locations with a local designation where the features may be affected by dust deposition.
- Indicative example is a local Nature Reserve with dust sensitive features.

Table 2, 3 and 4 show how the sensitivity of the area may be determined for dust soiling, human health and ecosystem impacts respectively. These tables take account of a number of factors which may influence the sensitivity of the area.

Table 2: Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m) <sup>c</sup>			
		<20	<50	<100	<350
High	>100	High	High	Medium	Low
	10-100	High	Medium	Low	Low
	1-10	Medium	Low	Low	Low
Medium	>1	Medium	Low	Low	Low
Low	>1	Low	Low	Low	Low

#### Platts Lane

**With 10-100 High Sensitivity Receptors within 50m of the site boundary, the sensitivity of the area to dust soiling effects on people and property could be considered MEDIUM**

Table 3: Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Annual Mean PM <sub>10</sub> concentration <sup>c</sup>	Number of Receptors <sup>d</sup>	Distance from the Source (m) <sup>e</sup>				
			<20	<50	<100	<200	<350
High	>32 µg/m <sup>3</sup> (>18 µg/m <sup>3</sup> in Scotland)	>100	High	High	High	Medium	Low
		10-100	High	High	Medium	Low	Low
		1-10	High	Medium	Low	Low	Low
	28-32 µg/m <sup>3</sup> (16-18 µg/m <sup>3</sup> in Scotland)	>100	High	High	Medium	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	High	Medium	Low	Low	Low
	24-28 µg/m <sup>3</sup> (14-16 µg/m <sup>3</sup> in Scotland)	>100	High	Medium	Low	Low	Low
		10-100	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	<24 µg/m <sup>3</sup> (<14 µg/m <sup>3</sup> in Scotland)	>100	Medium	Low	Low	Low	Low
		10-100	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Medium	>32 µg/m <sup>3</sup> (>18 µg/m <sup>3</sup> in Scotland)	>10	High	Medium	Low	Low	Low
		1-10	Medium	Low	Low	Low	Low
	28-32 µg/m <sup>3</sup> (16-18 µg/m <sup>3</sup> in Scotland)	>10	Medium	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	24-28 µg/m <sup>3</sup> (14-16 µg/m <sup>3</sup> in Scotland)	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
	<24 µg/m <sup>3</sup> (<14 µg/m <sup>3</sup> in Scotland)	>10	Low	Low	Low	Low	Low
		1-10	Low	Low	Low	Low	Low
Low	-	≥1	Low	Low	Low	Low	Low

Background monitoring data for NO<sub>2</sub> and PM<sub>10</sub> concentrations have been obtained from the Defra UK Background Air Pollution maps. These 1km grid resolution maps are derived from a complex modelling exercise that takes into account emissions inventories and measurements of ambient air pollution from both automated and non-automated sites.. See Figure 3 below; background PM<sub>10</sub> levels below 24 µg/m<sup>3</sup>.

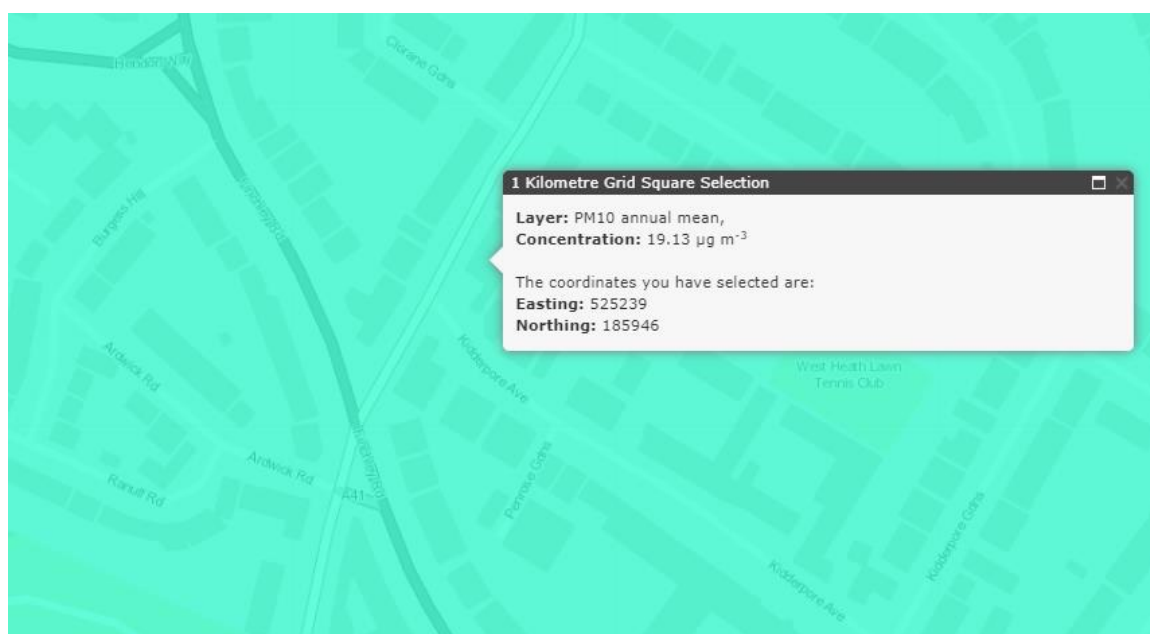


Figure 3 – background PM<sub>10</sub> levels**Platts Lane**

**With 10 - 100 High Sensitivity Receptors within 50m of the site boundary, the sensitivity of the area to human health impacts could be considered LOW**

Table 4: Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Distance from the Source (m) <sup>c</sup>	
	<20	<50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

**Platts Lane**

**With only Low Sensitivity Ecological Receptors within 20m of the site boundary, the sensitivity of the area to ecology impacts could be considered NEGLIGIBLE**

Table 5: Defining the Sensitivity of the Area

Potential Impact	Sensitivity of the Surrounding Area			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Medium	Medium	Medium	Medium
Human Health	Low	Low	Low	Low
Ecological	Negligible	Negligible	Negligible	Negligible

When using these tables, it should be noted that distances are to the dust source and so a different area may be affected by trackout than by on-site works. The highest level of sensitivity from each table should be recorded. It is not necessary to work through the whole of each table once it is clear that the highest level of sensitivity has been determined.

While these tables are necessarily prescriptive, professional judgement may be used to determine alternative sensitivity categories. The following additional factors should be considered when determining the sensitivity of the area.

- any history of dust generating activities in the area;
- the likelihood of concurrent dust generating activity on nearby sites;
- any pre-existing screening between the source and the receptors;
- any conclusions drawn from analysing local meteorological data which accurately represent the area; and if relevant
- the season during which the works will take place;
- any conclusions drawn from local topography;
- duration of the potential impact, as a receptor may become more sensitive over time; and
- any known specific receptor sensitivities which go beyond the classifications given in this document.

Any judgements made should be fully documented. Whatever approach to determining sensitivity of the area is taken, it is important that the basis of the decision is documented and Table 5 presents an example of how the sensitivity of the area may be presented.

**Step 2C: Define the Risk of Impacts**



The dust emission magnitude determined in STEP 2A should be combined with the sensitivity of the area determined in STEP 2B to determine the risk of impacts with no mitigation applied.

The matrices in Tables 6, 7, 8 and Table 9 provide a method of assigning the level of risk for each activity. These should be used to determine the level of site-specific mitigation that must be applied.

Mitigation is discussed in chapter 3 of this document. For those cases where the risk category is 'negligible', no mitigation measures beyond those required by accepted best practice will be required.

The primary aim of the AQDRA is to identify the appropriate site-specific mitigation measures that must be adopted to ensure there will be no significant effect on local amenity, public health or ecological sites. These mitigation measures should be identified in the AQDRA and included in an air quality and dust management plan (AQDMP), which should be submitted to the local authority for approval, prior to work commencing. The local authority should review the AQDRA report for each demolition / construction activity and make an assessment of the effects and risks identified.

Table 6: Risk of dust impacts – Demolition

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Medium Risk
Medium	High Risk	Medium Risk	Low Risk
Low	Medium Risk	Low Risk	Negligible

Table 7: Risk of Dust Impacts - Earthworks

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table 8: Risk of Dust Impacts - Construction

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Medium Risk	Low Risk
Low	Low Risk	Low Risk	Negligible

Table 9: Risk of Dust Impacts – Track-out

Sensitivity of Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High Risk	Medium Risk	Low Risk
Medium	Medium Risk	Low Risk	Negligible
Low	Low Risk	Low Risk	Negligible

The risk of dust impacts for the four activities can usefully be summarised in Table 10 below.

**Platts Lane**

Table 10: Summary Dust Risk Table to Define Site-Specific Mitigation

Potential Impact	Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	Low	Low	Medium	Negligible
Human Health	Negligible	Negligible	Low	Negligible
Ecological	Negligible	Negligible	Negligible	Negligible

**Overall, the development site at Platts Lane would be considered a MEDIUM risk site for the impact construction dust arisings.**

### 3 Dust and Emission Control Measures

#### 3. Dust and Emission Control Measures

##### 3.1 Appendix 7 of the London Mayor's SPG

The following table reviews all of the recommendations for a **MEDIUM** risk site given in the Air Quality Assessment following the guidance in Appendix 7 of SPG 8.

This table includes all the 'highly recommended' measures from the SPG document, as well as some "desirable" measures.

Mitigation Measures	Additional Comments
Site Management	
The name and contact details of person(s) accountable for air quality pollutant emissions and dust issues will be displayed on the site boundary.	
The head or regional office contact information will be displayed on the site boundary.	
Record and respond to all dust and air quality pollutant emissions complaints.	
Make a complaints log available to the local authority on a weekly basis or when asked.	The complaints log will be sent on a weekly basis to the Camden Environmental Officers within 24 hours via email
Carry out regular site inspections to monitor compliance with air quality and dust control procedures, record inspection results, and make an inspection log available to the local authority when asked.	The inspection log will be sent on a weekly basis to the Camden Environmental Officers within 24 hours via email
The frequency of visual inspections will be increased to Daily or Hourly when activities with a high potential for dust release are taking place, or during prolonged dry or windy weather conditions to ensure dust and emissions are controlled.	
Records will be kept of any exceptional incidents that cause dust and air quality pollutant emissions, either on or off the site, and the action taken to resolve the situation is recorded in the log book. Incidents will be recorded on a Trigger exceedance, Incident & Complaint Form (TIC Form).	TIC forms to be issued to the Camden Environmental Officers within 24 hours via email
<b>Preparing and maintaining the site</b>	
Plan site layout: Machinery and Dust generating activities will be located away from receptors.	

Solid screens or barriers will be erected around dust activities or the site boundary that are, at least, as high as any stockpiles on site. Screening height will always be higher than the parts of the building being demolished particularly adjacent to the site boundaries with the identified residential receptors.	
Fully enclosure site or specific operations where there is a high potential for dust production and the site is active for an extensive period.	Very specific to basement excavation & construction stage
Site runoff of water or mud will be avoided	
Site fencing, barriers and scaffolding will be kept clean using wet methods.	
Waste materials will be removed from site as soon as possible.	
Stockpiles will be covered and dampened down to prevent wind whipping.	
Dust soiling checks of buildings within 100m of site boundary will be carried out weekly (frequency increasing when activities with a high potential to produce dust are being carried out, and during prolonged dry or windy conditions). Cleaning to be provided if necessary.	Incidents will be reported to the Camden Environmental Officers by TIC form
<b>Operating vehicle/machinery and sustainable travel</b>	
All on-road vehicles will comply with the requirements of the London Low Emission Zone, as appropriate	
All non-road mobile machinery (NRMM) will comply with Stage IIIB emission criteria of Directive 97/68/EC and its subsequent amendments. This will apply to both variable and constant speed engines for both NOx and PM. An inventory of all NRMM will be registered on the NRMM register Alternative fuel sources to diesel will be investigated. Mains and battery powered equipment will be used in preference to diesel generators.	All NRMM plant will be recorded on the NRMM register: <a href="https://nrmm.london/user-nrmm/register">https://nrmm.london/user-nrmm/register</a>
Ensure all vehicles switch off engines when stationary – no idling vehicles.	
Mains or battery powered equipment will be used in preference to petrol and diesel powered generators.	
Impose and signpost a maximum-speed-limit of 10mph on surfaced haul routes and work areas (if long haul routes are required these speeds may be increased with suitable additional control measures provided,	

subject to the approval of the nominated undertaker and with the agreement of the local authority, where appropriate).	
The Air Quality Dust Management Plan (AQDMP) has included how Low Emission Vehicles i.e. Non-Diesel will be used during the demolition, construction and operational phases to minimise the impact of these vehicle emissions on local air quality.	
<b>Operations</b>	
Cutting, grinding or sawing equipment will be fitted or only used in conjunction with suitable dust suppression techniques such as water sprays or local extraction, e.g. suitable local exhaust ventilation systems.	
An adequate water supply will be ensured on the site for effective dust/particulate matter mitigation (using recycled water where possible) - including dust suppression during on site crushing activities.	
Enclosed chutes, conveyors and covered skips will be used on site.	
Drop heights from will be minimised conveyors, loading shovels, hoppers and other loading or handling equipment and use fine water sprays on such equipment wherever appropriate. Equipment will be readily available on site to clean any dry spillages, and clean up spillages as soon as reasonably practicable after the event using wet cleaning methods.	
<b>Waste Management</b>	
Reuse and recycle waste to reduce dust from waste materials	
Waste Materials will be removed from site as soon as possible	
Avoid bonfires and burning of waste materials.	
<b>Demolition</b>	
The inside of the buildings will be Soft Stripped before demolition (retaining walls and windows in the rest of the building where possible, to provide a screen against dust). If a concrete crusher is to be used on site further details of site specific dust mitigation measures will be required to be provided in accordance with conditions associated with the crusher's permit (under the Environmental Permitting Regulation 2010 (as amended)).	

Water suppression will be used during demolition and crushing operations.	
Explosive blasting will be avoided and appropriate manual or mechanical alternatives will be used.	
Any Biological debris will be bagged and removed or such material will be damped down before demolition.	
<b>Construction</b>	
Scabbling (roughening of concrete surfaces) will be avoided if possible.	
Sand and other aggregates will be stored in bunded areas and will be not allowed to dry out, unless this is required for a particular process, in which case it will be ensured that appropriate additional control measures are in place Smaller supplies of fine powder materials will be bagged and sealed after use and stored appropriately to prevent dust.	
<b>Trackout</b>	
Dry sweeping of large areas will be avoided.	
Vehicles entering and leaving sites will be securely covered to prevent escape of materials during transport.	
Implement a wheel washing system (with rumble grids to dislodge accumulated dust and mud prior to leaving the site where reasonably practicable).	

### 3.2 Dust Control Measures

All site activities will be controlled by Risk and Method Statements (RAMS).

These are project and activity specific. They will be produced by the trade contractor and reviewed/approved by the Principal Contractor. Dust control measures will be included where appropriate.

The decision has been made to crush suitable material on site to be used as the piling mat. This has significant environmental advantages in reducing vehicle movements (removing demolition waste from site and importing graded material to form the piling mat) and reduces the amount of waste taken to land-fill.

The proposed crusher selected meets the required Stage IIIB emission standards.

### 3.3 Requirements for Fuel

Every effort will be made to maximise the use of electric plant on site.

Whilst minimised where possible it is inevitable that a number of off road machines will be fuelled by gas-oil, but on-site fuel storage should not be required.



### 3.4 Details and Location of Fuel Storage On-site

Gas bottle cages will be used to store LPG cylinders. The cage/s will be located away from work areas and traffic routes.

### 3.5 Protection To Boundaries During Demolition

The main compound will be accessed off Platts Lane

Temporary hoardings / netting / screens around all work areas will be provided by the selected Principal Contractor and maintained for the duration of the construction work to ensure that construction works are always secure from unauthorised access and segregated from the Public.

Debris netting will be provided to any scaffolding.

Hoardings around the full site including will be 2.4m high, to comply with the HSE booklet HS (G) 151 "Protecting the Public" to the satisfaction of the Employer and the Local Authority (Camden).

The Hoarding design and erection will be carried out by a qualified subcontractor of the Principal Contractor. Weekly inspections of the hoarding will be carried out by the Principal Contractor as part of the temporary works checks to all on site temporary works.

## 4. Site Monitoring

### 4.1 Site Monitoring

As the site has been assessed as LOW risk for dust pollution and its impacts, site monitoring is not required subject to the mitigating dust and emission control measures being put in place as noted under Section 3.0 above.

## 5. Vehicles and NRMM Emissions

### 5.1 Techniques to reduce CO<sub>2</sub> emissions from construction vehicles

As part of our subcontracts for the construction of the works we will require our subcontractors to adopt 'green fleet' management practices in the operation of the site construction plant and the road licensed vehicles servicing the site. These practices require that all equipment and vehicles comply with the Euro 4 emission regulations. Our subcontractors will be required to demonstrate that they are taking measures to further reduce the carbon emissions of the operated plant and vehicles.

The introduction of the Euro V1 standards will be discussed and encouraged prior to the compulsory introduction.

### 5.2 Non-Road Mobile Machinery (NRMM)

All Non Road Mobile Machinery (NRMM) will comply with Stage IIIB emission criteria of Directive 97/68/EC and its subsequent amendments. This will apply to both variable and constant speed engines for both NO<sub>x</sub> and PM.

Alternative fuel sources to diesel will be investigated.

A register of compliance to these requirements will be submitted on [www.NRMM.london](http://www.NRMM.london). Particulate emissions from vehicles and equipment will be managed through appropriate procurement and on-site operational management including but not limited to the following measures:

- Engines and machinery will not be left running unnecessarily.
- Vehicles and equipment will be maintained routinely and records of such maintenance kept
- Equipment will be located away from potentially sensitive receptors
- Mains or battery powered equipment will be used and petrol and diesel powered generators will only be used if mains or battery powered equipment is not available

All non-road mobile machinery (NRMM) will use ultra-low sulphur diesel fuel and meet Stage IIIB of EU Directive 97/68/EC as a minimum. Where compliance with GLA requirements is not achievable or practical, an exemption will be sought from the GLA prior to arrival of the equipment on site.

Use of NRMM will be minimised as much as possible and electric or battery powered alternatives will be used as a preference. If NRMM under 37kW is to be used, use of the equipment will be minimised and kept as far away from sensitive receptors as practicable. Wates will also endeavour to use NRMM under 37kW fitted with after treatment devices where practicable.

NRMM of net power between 37kW and 560kW shall comply with the emission limits of EU Directive 97/68/EC Stage IIIA for Greater London. Where appropriate and as noted above, readily available NRMM achieving Stage IIIB will be considered for use. Should NRMM not achieving Stage IIIA be proposed for use this should be an exempt item of plant in accordance with the current GLA list of exemptions.

Lorries will meet current best environmental standards, including Euro 6 emission standards, where appropriate (as a minimum, all hauliers will adhere to the standard as set by the London Low Emission Zone at all times).

Other vehicles visiting the Worksite will meet London Low Emission Zone standards as a minimum.

## 6. Construction Noise & Vibration Management

### 6.1 Objective

This management plan defines the measures to control and limit noise emissions and vibration levels, at residential properties and other sensitive receptors in the vicinity of the project.

Given the proposed basement works and the proximity to the neighbouring properties, the Contractor will discuss and agree with the Local Authority whether to seek their formal consent in accordance with Section 61 of Control of Pollution Act 1974 to his proposed methods of work and to the steps he proposes in order to minimise noise. Notwithstanding this, the Contractor will discuss in detail and agree the proposed noise and vibration control measures with the local authority - Camden.

#### 6.1.1 General Requirements – Noise

Best Practicable Means (BPM) of noise control will be applied during construction works to minimise noise (including vibration) at neighbouring residential properties and other sensitive receptors arising from construction activities.

The general Principles of noise management are given below:

Control at source:

- Equipment – noise emissions limits for equipment brought to site.
- Equipment – method of directly controlling noise e.g. by retrofitting controls to plant and machinery.
- Equipment - indirect method of controlling noise e.g. acoustic screens.
- Equipment - indirect method of controlling noise e.g. benefits and practicality of using alternative construction methodology to achieve the objective e.g. vibratory piling techniques or hydro-demolition as opposed to more conventional but noisier techniques; selection of quieter tools/machines; application of quieter processes.

Control across site by:

- Administrative and legislative control,
- Control of working hours,
- Control of delivery areas and times,
- Careful choice of compound location,
- Physically screening site,
- Control of noise via Contract specification of limits,
- Noise Monitoring, to check compliance with noise level limits, cessation of works until alternative method is found.
- Many of the activities which generate noise can be mitigated to some degree by careful operation of machinery and use of tools. This may best be addressed by tool box talks and site inductions.

### 6.2 Best Practicable Means

BPM are defined in Section 72 of the Control of Pollution Act 1974 and Section 79 of the Environmental Protection Act 1990 as those measures which are:

“reasonably practicable having regard among other things to local conditions and circumstances, to the current state of technical knowledge and to financial implications”.

Entire Houze Ltd will require its contractors to consider mitigation in the following order:

- BPM as identified above, including:
  - Noise and vibration control at source: for example the selection of quiet and low vibration equipment, review of construction methodology to consider quieter methods, location of equipment on site, control of working hours, the provision of acoustic enclosures and the use of less intrusive audible warnings such as broadband vehicle reversing alarms;
  - Screening: for example local screening of equipment or perimeter hoarding; and
    - Where, despite the implementation of BPM, the noise exposure exceeds the criteria defined in this Construction Noise and Vibration Management Plan, or where there are residents who would still be affected (eg shift workers, young mothers, the elderly, sick or disabled residents) the Agency would offer temporary relocation if required. These residents will be identified prior to works taking place.

The recommendations of BS5228: 2009+A1:2014 ‘Code of practice for Noise and Vibration Control on Construction and Open Sites’, will be implemented, together with the specific requirements of this management plan.

### 1.3 Consultation

The contractor will be required to undertake consultation with Camden regarding any specific requirements for the management of noise and vibration during construction phase.

Notwithstanding the above, it is recognised that construction operations by their nature are noisy, however the impact on those living and working in the vicinity must be minimised as far as is reasonably practicable. The contractor will be required to undertake the following in terms of regarding noise and vibration management:

- 1) The maintenance of good community relations is vital. Experience shows that construction noise has the potential to cause disturbance but can be tolerated if prior warning and explanation has been given to residents. In particular advice regarding the nature of construction works, the duration of the works and mitigation measures to be implemented can help to reduce people’s reaction to noise. Contractors will consult local residents/communities regarding works and to give them details of a responsible appointed person on site who will be able to deal with queries.
- 2) Construction working hours should be carefully managed. All works should take place between normal working hours; 8:00am to 18:00, Monday to Friday; and 8:00 to 13:00 on Saturdays.
- 3) Camden have no pre-defined construction noise limits however; the contractor will employ best practicable means to control noise levels as far as is reasonably possible.
- 4) A pre-commencement external structural assessment of the properties closest to the construction areas where vibration is likely will be required.
- 5) Details of a 24/7 Complaints Procedure and Contacts to be agreed with Camden.



## 1.4 Noise and Vibration Control Measures

In addition to specific requirements of Camden, the Contractor will be required to adopt the following more specific measures:

### 1.4.1 Control measures

Without prejudice to the other requirements of this section, the Contractor shall comply with the recommendations set out in BS5228:2009 and in particular with the following requirements:

- Vehicles and mechanical plant will be maintained in a good and effective working order and operated in a manner to minimise noise emissions. The contractor will ensure that all plant complies with the relevant statutory requirements;
- HGV and site vehicles will be equipped with broadband, non-tonal reversing alarms;
- Compressor, generator and engine compartment doors will be kept closed and plant turned off when not in use;
- All pneumatic tools will be fitted with silencers/mufflers;
- Care would be taken when unloading vehicles to avoid un-necessary noise;
- The use of particularly noise plant will be limited, i.e. avoiding use of particularly noisy plant early in the morning;
- Restrict the number of plant items in use at any one time;
- Plant maintenance operations will be undertaken at distance from noise-sensitive receptors;
- Reduce the speed of vehicle movements;
- Ensure that operations are designed to be undertaken with any directional noise emissions pointing away from noise-sensitive receptors;
- When replacing older plant, ensure that the quietest plant available is considered;
- Drop heights will be minimised when loading vehicles with rubble;
- Vehicles should be prohibited from waiting within the site with their engines running or alternatively, located in waiting areas away from sensitive receptors;
- Local hoarding, screens or barriers should be erected to shield particularly noisy activities;
- Temporary noise screens will be used to reduce noise from particularly noisy activities and the height of perimeter hoarding will be extended where this would assist in reducing noise disturbance at sensitive receptors; and
- Hours of operation should be strictly enforced and any deviations other than those previously identified will be with the consent of Camden

### 6.4.2 Notifications

Occupiers of adjacent properties will be informed by the Contractor up to 2 weeks in advance of the works taking place, including the duration and likely noise and vibration effects.